

REMARKS

The disclosure stands objected to due to an informality. Applicants have amended the cited portion of the specification as suggested by the Examiner. Applicants accordingly request withdrawal of the objection.

Claims 1-3, 7, and 8 stand rejected under 35 U.S.C. §102(b) as being anticipated by Cunningham (5,790,334). Applicants have amended claims 2 and 7 to be in independent form, adding to each claim the features of independent claim 1. Claim 1 has been cancelled, without prejudice. As applied to the claims as amended, Applicants respectfully traverse the rejection for at least the reasons that Cunningham neither discloses nor suggests, among other features, deriving a variation in temperature as defined in claim 2, and calculating a quantity of variation in temperature, as defined in claim 7.

Regarding Claim 2, the Office Action cites Fig. 4; column 8, lines 39-48; column 9, line 66 to column 10, line 38; and column 10, line 61 to column 11, line 24 of Cunningham. However, Applicants respectfully submit that the cited portions, and the remainder of Cunningham, appear to lack any disclosure or suggestion of, among other things, the temperature variation deriving feature defined in Claim 2. Furthermore, regarding Claim 7, the Office Action refers to column 7, line 40 to column 8, line 20 of Cunningham. This cited portion fails to disclose or suggest at least the features defined in Claim 7. These cited portions of Cunningham instead appear only to disclose that a resistance ratio serves as an approximation of the temperature rise of MR read heads. See, for example, column 8, lines

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52-54. The invention defined in Claims 2 and 7, by contrast, includes, among other features, a process of deriving or calculating a variation in temperature. This is because, among other reasons, the variation in temperature could take different values depending on the kinds of the material used for MR read heads. Cunningham fails to disclose or suggest this actual calculation or derivation of a variation in temperature. Instead, Cunningham only suggests the approximation of a variation in temperature. For at least this reason claims 2 and 7 are believed to be allowable over Cunningham. Accordingly, Applicants respectfully request reconsideration and withdrawal of the rejection.

Additionally, Applicants respectfully traverse the rejection of claims 3 and 8 for the reasons stated above as applied to claims 2 and 7, respectively, and for at least the following additional reasons. Regarding Claim 3, the Office Action cites Abstract, lines 14-16; column 3, lines 53-63; and column 6, lines 43-54 of Cunningham. However, Applicants submit that the cited portions fail to disclose or suggest at least some of the features additionally defined in Claim 3. Regarding Claim 8, the Office Action also cites column 6, lines 43-54 of Cunningham. However, this cited portion of Cunningham only discloses that a maximum allowable bias current level is not exceeded in order to preserve the overall life expectancy of each MR head. See, for example, column 3, lines 59-61. Particularly, the invention in Claims 3 and 8 defines, among other things, a process of deriving an expected lifetime. Cunningham apparently fails to disclose or suggest the actual calculation of an expected lifetime. Instead, Cunningham only suggests a “result” from an appropriate setting

of current level. Thus, Applicants submit that Claims 3 and 8 are allowable over Cunningham for at least this additional reason. Accordingly, Applicants respectfully request reconsideration and withdrawal of the rejection.

Claims 12 and 13 stand rejected under 35 U.S.C. §102(e) as being anticipated by Gray (6,476,602). Applicants respectfully traverse the rejection, as Gray is believed to fail to show or suggest, among other features, a computer program code causing a computer to supply an electric current having different values (first and second current values) to an electromagnetic transducer in order to determine the magnitude of sensing current. The Office Action cites Fig. 6 and column 4, lines 41-59 in Gray as apparently teaching this concept. However, Applicants submit that these cited portions, and the remainder of Gray, apparently fail to disclose or suggest at least this feature. Accordingly, Applicants respectfully submit that claim 12 is allowable over the references of record, including Gray. Claim 13, having at least the features of independent claim 12, among other features, is believed to be similarly allowable over Gray. Accordingly, Applicants respectfully request reconsideration and withdrawal of the rejection.

Claims 14 and 15 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Gray in view of Cunningham. Applicants respectfully traverse the rejection for at least the reasons stated above as applied to claim 12, from which claims 14 and 15 depend, with respect to Gray, and for at least the additional reason that neither Cunningham nor Gray appears to disclose or suggest, among other features, at least the additional feature of

computer program code causing a computer to calculate a quantity of variation in temperature of an electromagnetic transducer to determine the magnitude of a sensing current, as defined in claim 14, from which claim 15 also depends. Accordingly, Applicants respectfully submit that Cunningham or Gray, alone or in combination, does not appear to disclose or suggest at least all of the features of claims 14 and 15. Accordingly, Applicants respectfully request reconsideration and withdrawal of the rejection.

The Examiner has indicated that claims 16 and 17 are allowed. Applicants acknowledge and appreciate this statement. The Examiner further indicates that claims 4-6 and 9-11 will be allowable if rewritten in independent form. At this time, Applicants elect to leave the claims in their current form pending the Examiner's response to this Amendment.

For at least the foregoing reasons, Applicants believe that this case is in condition for allowance, which is respectfully requested. The Examiner should call Applicants' attorney if an interview would expedite prosecution.

Respectfully submitted,

GREER, BURNS & CRAIN, LTD.

By



Arik B. Ranson
Registration No. 43,874
Attorney for Applicant

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300 S. Wacker Drive - Suite 2500
Chicago, Illinois 60606-6501
Telephone: (312) 360-0080
Facsimile: (312) 360-9315
Customer No. 24978

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